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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,363	09/12/2003	Michael S. DeFranks	SMCY-P01-101	6758
28120 7590 08/13/2010 ROPES & GRAY LLP PATENT DOCKETING 39/41 ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624				
EXAMINER BONK, TERESA				
ART UNIT		PAPER NUMBER		
3725				
MAIL DATE		DELIVERY MODE		
08/13/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/661,363

**Applicant(s)**

DEFRANKS ET AL.

**Examiner**

TERESA M. BONK

**Art Unit**

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-9,11-51 and 53-83 is/are pending in the application.  
4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9,11,17,22,23,28,33,34,51,53,59,64,65,70,75,76 and 81-83 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-646)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/25/2010
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims **withdrawn** from consideration are 12-16, 18-21, 24-27, 29-32, 35-50, 54-58, 60-63, 66-69, 71-74 and 77-80.

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 25, 2010 has been entered.

***Response to Arguments***

Applicant's arguments filed on June 25, 2010 have been considered but are moot in view of the new grounds of rejection.

***Allowable Subject Matter***

The indicated allowability of claim 2 is withdrawn in view of the newly discovered reference to Dubots et al. Rejections based on the newly cited reference follow.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3, 5-9, 11, 17, 22, 23, 28, 51, 53, 59, 64, 65, 70, and 81-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubots et al. (hereafter “Dubots”) (US Patent 4,625,503), newly presented in view of Sticht et al. (hereafter “Sticht”) (US Patent 4,523,447), previously presented.**

Dubots discloses an apparatus comprising a wire holder, including a reel (5) being rotatable about a reel axis (rotatable about shaft 6) having a wire (7), that supplies the wire to a processing apparatus (reel 9, tube 11, reel 12) along a feed direction, the wire holder supported, along a holding axis (3), by a low-friction coupling (2) that allows the wire holder to rotate freely about [via ball bearings 4] the holding axis in response to a torque acting about a cross section of the wire [Column 1, lines 59+], wherein the holding axis is oriented at a non-zero angle with respect to the reel axis, as seen in the Figure, and rotation of the wire holder about the holding axis would be capable of substantially alleviating the torque accumulated in the wire.

With regards to the limitations requiring “a wire comprising a plurality of strands twisted together” including claims 1, 5-9, and 83, Dubots’ apparatus would be capable of being used with the different types of wires. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

With regards to claim 2, Dubots also discloses wherein the holding axis is essentially aligned with the feed direction, as seen in the Figure.

With regards to claims 11 and 53, Dubots also discloses wherein the reel axis is essentially orthogonal to the feed direction, as seen in the Figure.

With regards to claim 28 and 70, Dubots also discloses further including a motor for rotating the wire holder about the holding axis [Column 1, lines 60-61].

Dubots discloses the invention substantially as claimed except for wherein the apparatus is for manufacturing a coil spring from the wire, comprising a coil-spring winder that forms the wire into a coil spring having a plurality of turns. **Sticht** is relied upon to teach an apparatus have a feeding reel (85) being turned while paying out wire to a processing station that is a wire coiler (46) that forms the wire into a coil having a plurality of turns, as seen in Figure 5. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Dubots' processing apparatus (reel 9, tube 11, reel 12) for Sticht's processing apparatus (wire coiler 46) because simple substitution of one known for another obtains predictable results.

With regards to claims 17, 22, 23, 59, 64, 65, and 82, Dubots discloses the invention substantially as claimed except for further including a motor for rotating the reel about the reel axis, and for dispensing the wire along the feed direction from the wire holder and further comprising a motor controller responsive to the longitudinal tension measured by a tension sensor and being operatively engaged with the motor for regulating speed or direction of rotation of the motor. **Sticht** is relied upon to teach a wire coiler device including a motor (88) for rotating the reel (85) about the reel, and for dispensing the wire along the feed direction from the reel and further comprising a motor controller (90) responsive to the longitudinal tension measured by tension sensor (91) and being operatively engaged with the motor for regulating speed or direction of rotation of the motor including periodically starting and stopping the supply of wire [Column 7, lines 59+ - Column 8, lines 1-22]. Therefore it would have been obvious to

one of ordinary skill in the art at the time the invention was made to provide a motor and subsequent controller and sensor in Dubots because combining prior art elements according to known methods yield predictable results.

With regards to claim 3 and 81, the combination of Dubots and Sticht would provide for wherein the rotation of the wire holder is synchronous with formation of the turns of the coil spring by the coil-spring winder with Sticht's motor controller.

**Claims 33, 34, 75, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubots in view of Sticht and Otzen et al. (hereafter "Otzen") (US Patent 5,865,051), previously cited.**

The combination of Dubots and Sticht discloses the invention substantially as claimed except for further comprising a torque sensor for measuring torque acting about a cross section of the wire and further comprising a motor controller responsive to the torque measured by the torque sensor. **Otzen** is relied upon to teach a wire coiler having a torque sensor (E1) for measuring torque acting about a cross section of the wire and further comprising a motor controller responsive to the torque measured by the torque sensor [Column 4, lines 24-30, 55+]. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a torque sensor because combining prior art elements according to known methods yield predictable results.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa Bonk whose telephone number is 571-272-1901. The examiner can normally be reached on Monday-Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on 571-272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa M. Bonk/  
Examiner, Art Unit 3725